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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/802,717
Filing Date: March 18, 2004
Appellant(s): SAITO ET AL.

David Emery
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 18, 2009 appealing from the Office action mailed December 17, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,442,852	**Lord**	**4-1984**
5,505,785	**Ferrell**	**4-1996**

"Products: Microarray Instruments." TeleChem International, Inc. 24 December 2002. <http://web.archive.org/web/20021224172955/http://arrayit.com/Products/Microarray/PPCK80/ppck80.html>.

Jackson, David P. "Centrifugal Shear Carbon Dioxide Cleaning." Adv. Mater. Process. 1995. http://www.p2pays.org/ref/02/01015.pdf

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Interpretations

Applicant uses "means for" language in Claims 1 and 3. These claims were interpreted under 35 USC 112, 6th paragraph. Claim 1 states "...ultrasonic vibration generating means for generating ultrasonic vibrations directed to the cleaning solution in which the stylus portion of the probe pin facing downward is immersed." The source of the "ultrasonic vibrations directed to the cleaning solution in which the stylus portion of the probe pin facing downward is immersed" of Claim 1 was interpreted as "the ultrasonic vibration generator that is composed of a vibrator that is provided within an internal room formed between the bottom of the cleaning

container and the bottom of the external box, and secured to the outer bottom of the cleaning container; and an oscillator that is electrically connected with this vibrator and placed outside the external box" based on page 6, lines 14-20 of specification. Claim 3 states "…an ultraviolet irradiating means for irradiating the stylus portion of the probe pin with ultraviolet rays for detecting the presence or absence of a foreign particle on the portion." The source of the "…ultraviolet irradiating means for irradiating the stylus portion of the probe pin with ultraviolet rays for detecting the presence or absence of a foreign particle on the portion" of Claim 3 was interpreted as "a black light apparatus" based on page 8, lines 12 and 14-18 of specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeleChem, in view of Lord (U.S. Patent 4,442,852, hereafter '852), and further in view of Ferrell (U.S. Patent 5,505,785, hereafter '785).

Claims 1 and 7: TeleChem teaches a fixing member that fixes pins upright [clear plastic center of Figs. 1-2] as well as a supporting member for supporting the fixing member [the white rack, Figs. 1-2] while being cleaned in an ultrasonic machine [Fig. 2] in which the stylus portion of the probe pin is immersed in the cleaning solution [Fig. 2]. Figures 1-2 show that the legs of the support member hold the fixing member above the bottom of the tank. Furthermore, the tank

is capable of holding cleaning solution at a lower level than the fixing member. Therefore, TeleChem teaches the supporting member supports the fixing member above the cleaning solution so that a stylus portion of the probe pin is immersed in the cleaning solution as well as placing a supporting member on the bottom of the cleaning container because the legs of the support member can rest on the bottom of the container.

It does not teach a cleaning container for containing cleaning solution or that the ultrasonic vibration generator that is composed of a vibrator that is provided within an internal room formed between the bottom of the cleaning container and the bottom of the external box, and secured to the outer bottom of the cleaning container; and an oscillator that is electrically connected with this vibrator and placed outside the external box. However, '852 teaches a cleaning container [(20), Fig. 1, col. 3, lines 15-19] for containing a cleaning solution [(30), Fig. 1, col. 3, line 27]. It also teaches that the cleaning container is an ultrasonic cleaner [abstract, (10), Fig. 1, col. 3, line 9] that contains a vibrator [(24), Fig. 1] provided within an internal room [the cabinet is (12), Fig. 1, col. 3, line10, and the cutaway reveal the vibrator in an internal room] formed between the bottom of the cleaning container [col. 3, lines 19-23] and the bottom of the external box [(18) references the feet on which the bottom of the cabinet or external box rests, Fig. 1], and secured to the outer bottom of the cleaning container for increasing the cleaning performed [col. 3, lines 23-30]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ultrasonic cleaner of '852 as the cleaner of TeleChem because '852 teaches that it increases the cleaning performed.

They do not teach that the oscillator that is electrically connected with this vibrator and placed outside the external box. However, ' 785 teaches an oscillator [(610), Fig. 6, 610 is the

ultrasonic generator that include a frequency modulation capability] connected to the vibrators [(606 and 608), Fig. 6] and located outside of the external box [col. 9, lines 57-67] that prevents the formation of standing waves in turn preventing damage to the wafers being cleaned. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the oscillator of '785 as the oscillator in the cleaning device of TeleChem because '785 teaches that it is able to prevent damage from occurring by preventing the formation of standing waves.

Claims 2 and 8: TeleChem, '852, and '785 teach the limitations of claims 1 and 7, respectively, above. They do not teach that cleaning solution includes ethyl alcohol. However, '135 teaches that the cleaning solution includes ethyl alcohol [col. 1, lines 61-65; col. 2, lines 2-5]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cleaning solution of '135 as the cleaning solution of TeleChem because '135 teaches that it is a suitable cleaning solution for use in an ultrasonic device for materials made of metal [col. 4, lines 47-54].

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over TeleChem, '852, and '785 as applied to claim 2 above, and further in view of Jackson.

Claims 3 and 9: TeleChem, '852, '785, and '135 teach the limitations of claims 2 and 8, respectively, above. They do not teach an ultraviolet irradiating means (i.e. a black light). The Examiner takes Official Notice that is common knowledge to one of ordinary skill in the art of cleaning that a black light can be used to evaluate the cleanliness of products. See for example, Jackson, where black light inspection techniques have been used to evaluate cleaned products

[e.g. electronic] [page 233, Application and Performance]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the black light of Jackson to inspect the cleanliness of the TeleChem apparatus because Jackson teaches that it is a suitable means for evaluating cleaned products.

(10) Response to Argument

In response to appellant's argument that TeleChem does not teach the fixing member being supported above the cleaning solution, the examiner respectfully disagrees. TeleChem teaches in Figures 1-2 that the legs of the support member hold the fixing member above the bottom of the tank. Furthermore, the tank is capable of holding cleaning solution at a lower level than the fixing member. The Examiner is well aware that TeleChem suggests placing a certain amount of solution into the tank to prevent damage; however, this does not take away from the fact that the tank is able to have less than the amount of cleaning solution suggested by the TeleChem reference. In fact, TeleChem's warning not to operate with the volume less than one liter (See p. 3, last full paragraph) clearly envisages and discloses that the apparatus is capable of such operation and further, that it *will* so operate unless care is taken. The current claims are to an apparatus and as long as the apparatus of TeleChem is capable of holding less cleaning solution which results in the support being placed on the bottom of the container, the prior art apparatus meet the requirements of the claimed feature. Therefore, TeleChem teaches the supporting member supports the fixing member above the cleaning solution so that a stylus portion of the probe pin is immersed in the cleaning solution.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Nicole Blan/

Examiner, Art Unit 1792

Conferees:

/Michael Cleveland/

Supervisory Patent Examiner, Art Unit 1792

/Benjamin L. Utech/

Primary Examiner